



# Agassiz Pool Accelerated Sediment Reduction



## Clean Water Funds: 2012

Clean Water Grant	\$178,750
Leveraged Funds*	\$89,375
Total Project Budget	\$268,125

\* Leveraged Funds include

### Targeted Water:

Mud, Moose, Thief Rivers

### Project Sponsor:

Marshall County Soil and Water Conservation District

### Grant Period:

January 2012—December 2014

### Project Contact:

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C12-153 - Clean Water Assistance

## Project Narrative

The Thief River and its tributaries have deteriorating water quality due to sedimentation. Sediment plumes and deltas have formed at the inlets of pools in Agassiz National Wildlife Refuge (Agassiz Pool) and Thief Lake, an important recreational resource in Northwest Minnesota.

Radioisotope soil fingerprinting indicates the severity of the sedimentation problem is within Agassiz Pool. It is estimated that 14,900 tons of sediment has been deposited in Agassiz Pool annually, since 1938. The fingerprinting analysis indicates the dominant source of this sediment is erosion of uplands and fields. This project is a collaborative



partnership with USDA-NRCS to establish 50 ft. wide native grassed filter strips, grade-stabilization structures, and field windbreaks to prevent or reduce sedimentation problems. This effort will stabilize the soil, slow down water runoff, and filter the water before entering ditches and streams. The goal is to establish 16 miles of grassed filter strips, 5 miles of field windbreaks, and install 25 grade stabilization structures where needed. Targeted areas within the Thief River Watershed have been prioritized through analysis of sub-basin sediment yields generated by a Soil and Water Assessment Tool model of the watershed. The model estimates that these practices can reduce sediment loads by more than 1,500 tons/year.

## Proposed Outcomes:

Buffer strips - Mud, Moose, Thief Rivers

Side-water inlets - Mud, Moose, Thief Rivers

Field Windbreaks - Mud, Moose, Thief Rivers

Proposed Reductions: 1,800 Phosphorus lbs/year and 1,500 Sediment tons/year

## Actual Outcomes:

Project in Progress

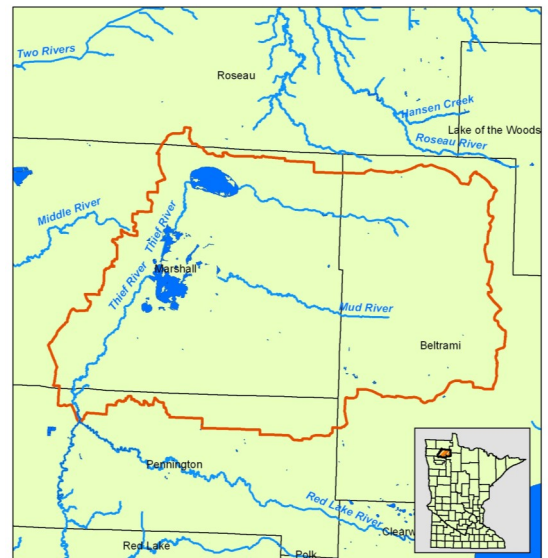
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THIEF RIVER WATERSHED EROSION PHOTOS



Erosion Sites in Thief Watershed

Thief Watershed  
Minnesota



Thief River Watershed SWAT Model  
Current Sediment Yield

